

REMARKS

Invention Election

The Office asserts that applicants are required to elect a single invention to which the claims must be restricted, selected from:

Group I - claims 1-49 and 62-69;
Group II - claims 50 and 70-71;
Group III - claims 51 and 72-73;
Group IV - claims 52-57, 61 and 74-75; and
Group V - claims 58-60 and 76.

The Office asserts that Groups I-V do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they allegedly lack the same or corresponding special technical feature. The Office asserts that the technical feature allegedly shared by the claims is the mixture of particles recited in claim 1. The Office asserts that this shared technical feature is allegedly taught by Kaneda (USPN 6,638,662). Applicants respectfully traverse the restriction requirement, in that applicants make no admission that Kaneda teaches or suggest the asserted shared technical feature of Groups I-V.

In response to the requirement to elect an invention, even with traverse, applicants respectfully **elect Group I (claims 1-49 and 62-69)** for prosecution on the merits.

Species Elections

The Office has asserted that if Group I is elected, a further species election is required. The Office has asserted that applicants must make a selection from Category A and from Category B.

Category A

Species A1 - non-conducting nucleus
Species A2 - semi-conducting nucleus

Category B

Species B1 - claim 21 - coating of a carbon-metal hybrid mixture
Species B2 - claim 22-34 - coating of two different forms of carbon

Applicants respectfully **elect Species A1 and Species B2**, with traverse.

Applicants respectfully highlight to the Examiner that the presently claimed invention has three main choices for the nucleus material, as evidenced by claims 5, 13 and 14:

Claim	Nucleus
5	nuclei comprise at least one phosphate, one nitride, one oxide or a mixture of two or more of them
13	the nucleus of said particles is semi-conducting and consists of a material selected from the group consisting of Si, doped Si, or Ge, Ge and InSb
14	the nucleus of said particles is non conducting and consists of a material selected from the group consisting of glasses, mica and SiO ₂

Currently, the Office is maintaining that the subject matter of claim 5 is generic to the species of Categories A and B. If the Office were to reconsider that indication, applicants would respectfully request a reconsideration of Category A. That is, applicants make no election that does not include the subject matter of claim 5. It is in this regard that applicants traverse the species election requirement.

The Office has further asserted that if Species A1 is elected, that further species election is required from:

Species A1(a) - glasses

Species A1(b) - mica

Species A1(c) - SiO₂

Applicants respectfully **elect Species A1(c)**.

The Office has further asserted that if Species B2 is elected, that further species election is required from:

Species B2(a) - low crystallinity carbon

Species B2(b) - high crystallinity carbon

Applicants respectfully traverse this species requirement. Applicants have elected Species B2, a coating of at least two **different** conducting forms of carbon.

Accordingly, a primary embodiment of a coating covered by Species B2 is one that has both low and high crystallinity carbon. Accordingly, the species restriction between Species B2(a) and B2(b) is not proper within the context of the presently claimed invention - a hybrid carbon mixture that comprises at least two **different** conducting forms of carbon. Applicants respectfully request that this species election requirement be withdrawn.

Claims

The Office has identified claims 1-12 and 15-20 to be generic to the Species of Group I. Applicants respectfully assert that claims (in addition to claims 1-12 and 15-20) 35-49 and 62-69 are generic to the Species of Group 1. Further, applicants assert that claims 14 is within the species election of Species A1 and that claims 22-34 are within the species election of Species B2. Accordingly, applicants respectfully assert that claims 1-12, 14-20, 22-49 and 62-69 read on the elected species. Claims 13, 21, 50-61 and 70-76 are currently withdrawn.

Conclusion

For at least the reasons stated above, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections and objections, and to allow the present application.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

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